HPCL Engineer (Electrical) 23 Dec 2023

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Participant ID	
Participant Name	
Test Center Name	
Test Date	23/12/2023
Test Time	2:00 PM - 4:30 PM
Subject	Electrical Engineer

Section : **English Language**

Q.1 **Choose the most logical order of the sentences from among the four given choices to construct a coherent paragraph.**

Language is a tool used by society to communicate since ancient times.
A) Therefore, schools such as the Full Boarding School, for example, provide an opportunity for students to learn five international languages, namely, French, German, Japanese, Chinese, and Arabic through international language learning.
B) Therefore, many benefits will be obtained by someone who masters other languages besides the mother tongue.
C) In facing this globalization era, the ability to master and communicate in various languages is an advantage to an individual.
D) Without the ability and proficiency in speaking in various languages, it is quite difficult for someone to communicate especially with individuals of different races.

Ans ✗ 1. ABCD

✔ 2. CADB

✗ 3. DACB

✗ 4. CBDA

> Question ID : **630680507281**
> Option 1 ID : **6306801982579**
> Option 2 ID : **6306801982578**
> Option 3 ID : **6306801982577**
> Option 4 ID : **6306801982580**
> Status : **Answered**
> Chosen Option : **2**

Q.2 **Select the most appropriate SYNONYM of the given word below.**

Precedence

Ans ✔ 1. Priority

✗ 2. Unnecessary

✗ 3. Unwanted

✗ 4. Secondary

> Question ID : **630680507287**
> Option 1 ID : **6306801982601**
> Option 2 ID : **6306801982603**
> Option 3 ID : **6306801982604**
> Option 4 ID : **6306801982602**
> Status : **Answered**
> Chosen Option : **4**

Q.3 Choose the most appropriate one-word substitution for the below word.

"The study of the evolution of mankind"

Ans
✗ 1. Botany

✗ 2. Geology

✔ 3. Anthropology

✗ 4. Lexicography

Question ID : **630680507282**
Option 1 ID : **6306801982584**
Option 2 ID : **6306801982582**
Option 3 ID : **6306801982583**
Option 4 ID : **6306801982581**
Status : **Answered**
Chosen Option : **3**

Q.4 Fill in the blank with the correct word from the below options.

Spending three days working on a farm in rural China has given me a newfound _____ for the difficulties of farming and the challenges faced by farmers.

Ans
✔ 1. appreciation

✗ 2. pleasure

✗ 3. contempt

✗ 4. disgust

Question ID : **630680507288**
Option 1 ID : **6306801982606**
Option 2 ID : **6306801982608**
Option 3 ID : **6306801982607**
Option 4 ID : **6306801982605**
Status : **Answered**
Chosen Option : **1**

Q.5 In the following question a part of the statement is given in brackets. You are required to replace the text with correct Idioms given in the options.

David thought Christopher was the one who broke the vase, but he was (looking for the answers in the wrong place).

Ans
✔ 1. barking up the wrong tree

✗ 2. pleased as punch

✗ 3. on the ball

✗ 4. miss the boat

Question ID : **630680507284**
Option 1 ID : **6306801982591**
Option 2 ID : **6306801982592**
Option 3 ID : **6306801982590**
Option 4 ID : **6306801982589**
Status : **Answered**
Chosen Option : **1**

Q.6 Fill in the blank with the correct word from the below options.

Spending three days working on a farm in rural China has given me a newfound adoration for the difficulties of farming and the challenges faced by farmers. I now understand the difficulties _____ in digging up potatoes and carrying them back home and appreciate the hard work that goes into providing for a family.

Ans ✗ 1. attracted

✗ 2. unimaginable

✗ 3. evolved

✓ 4. involved

Question ID : **630680507290**
Option 1 ID : **6306801982614**
Option 2 ID : **6306801982616**
Option 3 ID : **6306801982615**
Option 4 ID : **6306801982613**
Status : **Answered**
Chosen Option : **4**

Q.7 Select the most appropriate adjective from the given option to fill in the blanks for the given sentence.

We were _____ when we heard the news.

Ans ✗ 1. bored

✗ 2. shocking

✓ 3. shocked

✗ 4. amazing

Question ID : **630680507279**
Option 1 ID : **6306801982572**
Option 2 ID : **6306801982570**
Option 3 ID : **6306801982571**
Option 4 ID : **6306801982569**
Status : **Answered**
Chosen Option : **3**

Q.8 In the following question a part of the statement is given in brackets. You are required to replace the text with correct Idioms given in the options.

We're (trying very hard but have little or no success) here; we need a plan before we do any more work.

Ans ✗ 1. spill the beans

✗ 2. sleep like a log

✗ 3. selling like hotcakes

✓ 4. just running in circles

Question ID : **630680507285**
Option 1 ID : **6306801982596**
Option 2 ID : **6306801982595**
Option 3 ID : **6306801982593**
Option 4 ID : **6306801982594**
Status : **Answered**
Chosen Option : **4**

Q.9 Choose the most appropriate one-word substitution for the below word.

"A large cage, building, or enclosure to keep birds "

Ans ✗ 1. Asylum

✔ 2. Aviary

✗ 3. Casino

✗ 4. Apiary

Question ID : **630680507283**
Option 1 ID : **6306801982587**
Option 2 ID : **6306801982586**
Option 3 ID : **6306801982588**
Option 4 ID : **6306801982585**
Status : **Answered**
Chosen Option : **2**

Q.10 Fill in the blank with the correct word from the below options.

Spending three days working on a farm in rural China has given me a newfound respect for the difficulties of farming and the challenges faced by farmers. Prior to this experience, I had never considered the amount of _____ required to produce the potatoes we eat at home.

Ans ✔ 1. effort

✗ 2. force

✗ 3. ease

✗ 4. inactivity

Question ID : **630680507289**
Option 1 ID : **6306801982609**
Option 2 ID : **6306801982611**
Option 3 ID : **6306801982610**
Option 4 ID : **6306801982612**
Status : **Answered**
Chosen Option : **1**

Q.11 Choose the most logical order of the sentences from among the four given choices to construct a coherent paragraph.

In this era of globalization, society seems to be too busy chasing worldly luxuries and often neglects healthy lifestyle practices, especially recreational activities.
A) This is because they take the importance of recreational activities lightly.
B) Without realizing it, there are actually various benefits of recreation to society.
C) One of the benefits of recreation to society is the ability to strengthen relationships, whether with the local community or with one's own family members. This is because through recreational activities, individuals will interact with others around them, thus strengthening relationships.
D) For example, through recreational activities, we can have friendly conversations with neighbors. It is clear that recreation can strengthen relationships between individuals.

Ans ✔ 1. ABCD

✗ 2. ACBD

✗ 3. ADBC

✗ 4. BDAC

Question ID : **630680507280**
Option 1 ID : **6306801982576**
Option 2 ID : **6306801982575**
Option 3 ID : **6306801982574**
Option 4 ID : **6306801982573**
Status : **Answered**
Chosen Option : **1**

Q.12 Select the most appropriate SYNONYM of the given word below.

Discern

Ans ✓ 1. Notice

✗ 2. Ignore

✗ 3. Neglect

✗ 4. Disregard

Question ID : **630680507286**
Option 1 ID : **6306801982598**
Option 2 ID : **6306801982597**
Option 3 ID : **6306801982600**
Option 4 ID : **6306801982599**
Status : **Answered**
Chosen Option : **2**

Q.13 Select the most appropriate adjective from the given option to fill in the blanks for the given sentence.

The movie we watched last night was _____.

Ans ✗ 1. terrified

✓ 2. Boring

✗ 3. interested

✗ 4. bored

Question ID : **630680507278**
Option 1 ID : **6306801982565**
Option 2 ID : **6306801982568**
Option 3 ID : **6306801982567**
Option 4 ID : **6306801982566**
Status : **Answered**
Chosen Option : **2**

Comprehension:

Read the below passage and answer the questions.

Tobacco is a deadly menace, responsible for millions of deaths annually. It is highly addictive and contains harmful substances that can lead to a variety of diseases, including cancer, heart disease, and stroke. The tobacco industry invests heavily in advertising to perpetuate addiction and counter efforts towards cessation.

To combat smoking, we need to prioritize the well-being of our youth and equip them with the necessary knowledge and support to resist the allure of smoking. We also need to raise awareness among the broader community about the devastating consequences of tobacco use. Efforts to combat smoking must extend beyond individual actions and include robust policies and regulations. Strict laws limiting tobacco advertising, particularly targeting vulnerable populations like young people, should be enforced. Implementing smoke-free policies in public spaces, workplaces, and public transportation can protect non-smokers from the harmful effects of secondhand smoke.

Creating a united front against tobacco requires collaboration between government bodies, healthcare organizations, non-profit groups, and individuals. By pooling resources and expertise, impactful strategies can be implemented to reduce smoking rates and prevent unnecessary deaths.

In the pursuit of a tobacco-free future, ongoing research and development play a vital role. Scientists and medical professionals should continue investigating the long-term effects of smoking and developing innovative cessation methods. Accessible and affordable treatments, including counselling services, nicotine replacement therapies, and medications, must be made available to those seeking to quit smoking.

The journey towards a tobacco-free society demands perseverance, determination, and a collective effort. Public health must take precedence over the interests of the tobacco industry. By empowering individuals, implementing strong policies, and fostering a culture of health, we can pave the way for a brighter, smoke-free future for generations to come.

SubQuestion No : 14

Q.14 Identify the central theme of the passage.

Ans ✗ 1. The passage talks about the importance of tobaccos to tackle boredom.

✗ 2. The passage talks about the different methods to quit or reduce smoking.

✗ 3. The passage talks about the pooling of resources and expertise to be implemented to enhance smoking rates and prevent unnecessary deaths.

✓ 4. The passage talks about the collective efforts required by individuals and the concerned authorities to ensure a smoke-free future for generations.

Question ID : **630680507293**
Option 1 ID : **6306801982622**
Option 2 ID : **6306801982623**
Option 3 ID : **6306801982621**
Option 4 ID : **6306801982624**
Status : **Answered**
Chosen Option : **4**

Comprehension:

Read the below passage and answer the questions.

Tobacco is a deadly menace, responsible for millions of deaths annually. It is highly addictive and contains harmful substances that can lead to a variety of diseases, including cancer, heart disease, and stroke. The tobacco industry invests heavily in advertising to perpetuate addiction and counter efforts towards cessation.

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SubQuestion No : 15

Q.15 Select the most appropriate SYNONYM of the given word below.

Cessation

Ans ✗ 1. Extension

✗ 2. Survival

✔ 3. Ending

✗ 4. Continuation

Question ID : **630680507295**
Option 1 ID : **6306801982630**
Option 2 ID : **6306801982631**
Option 3 ID : **6306801982632**
Option 4 ID : **6306801982629**
Status : **Answered**
Chosen Option : **3**

Comprehension:

Read the below passage and answer the questions.

Tobacco is a deadly menace, responsible for millions of deaths annually. It is highly addictive and contains harmful substances that can lead to a variety of diseases, including cancer, heart disease, and stroke. The tobacco industry invests heavily in advertising to perpetuate addiction and counter efforts towards cessation.

To combat smoking, we need to prioritize the well-being of our youth and equip them with the necessary knowledge and support to resist the allure of smoking. We also need to raise awareness among the broader community about the devastating consequences of tobacco use. Efforts to combat smoking must extend beyond individual actions and include robust policies and regulations. Strict laws limiting tobacco advertising, particularly targeting vulnerable populations like young people, should be enforced. Implementing smoke-free policies in public spaces, workplaces, and public transportation can protect non-smokers from the harmful effects of secondhand smoke.

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The journey towards a tobacco-free society demands perseverance, determination, and a collective effort. Public health must take precedence over the interests of the tobacco industry. By empowering individuals, implementing strong policies, and fostering a culture of health, we can pave the way for a brighter, smoke-free future for generations to come.

SubQuestion No : 16

Q.16 Identify the suitable title for the passage.

Ans   ✓ 1. Tobacco- A public Health crisis

✗ 2. Threats to society

✗ 3. Efforts to combat smoking

✗ 4. Smoke free society

Comprehension:

Read the below passage and answer the questions.

Tobacco is a deadly menace, responsible for millions of deaths annually. It is highly addictive and contains harmful substances that can lead to a variety of diseases, including cancer, heart disease, and stroke. The tobacco industry invests heavily in advertising to perpetuate addiction and counter efforts towards cessation.

To combat smoking, we need to prioritize the well-being of our youth and equip them with the necessary knowledge and support to resist the allure of smoking. We also need to raise awareness among the broader community about the devastating consequences of tobacco use. Efforts to combat smoking must extend beyond individual actions and include robust policies and regulations. Strict laws limiting tobacco advertising, particularly targeting vulnerable populations like young people, should be enforced. Implementing smoke-free policies in public spaces, workplaces, and public transportation can protect non-smokers from the harmful effects of secondhand smoke.

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The journey towards a tobacco-free society demands perseverance, determination, and a collective effort. Public health must take precedence over the interests of the tobacco industry. By empowering individuals, implementing strong policies, and fostering a culture of health, we can pave the way for a brighter, smoke-free future for generations to come.

SubQuestion No : 17

Q.17 Select the most appropriate SYNONYM of the given word below.

Combat

Ans ✗ 1. Encourage

✗ 2. Promote

✓ 3. Oppose

✗ 4. Forward

Question ID : **630680507294**
Option 1 ID : **6306801982626**
Option 2 ID : **6306801982628**
Option 3 ID : **6306801982627**
Option 4 ID : **6306801982625**
Status : **Answered**
Chosen Option : **3**

Section : **Quantitative Aptitude**

Q.1 If $x : y = 7 : 4$ then $(x^2+y^2):(x^2-y^2)$ is equal to:

Ans ✓ 1. $65 : 33$

✗ 2. $5 : 3$

✗ 3. $33 : 56$

✗ 4. $17 : 22$

Question ID : **630680507654**
Option 1 ID : **6306801984059**
Option 2 ID : **6306801984057**
Option 3 ID : **6306801984060**
Option 4 ID : **6306801984058**
Status : **Answered**
Chosen Option : **1**

Q.2 A rat climbed onto a 540 cm diameter pedal of a water wheel over a bucket, which traveled an angle of 190 degrees before falling. Calculate the linear length moved by the rat with the bucket before it falls.

Ans
- ✗ 1. 180π
- ✗ 2. 300π
- ✗ 3. 210π
- ✓ 4. 285π

Question ID : **630680507669**
Option 1 ID : **6306801984117**
Option 2 ID : **6306801984120**
Option 3 ID : **6306801984118**
Option 4 ID : **6306801984119**
Status : **Answered**
Chosen Option : **4**

Q.3 A city, which has a population of 3200, requires 10 litres of water per person per day. It has a cuboidal tank measuring 16 m × 9 m × 8 m. If the tank is full of water then for how many days will the water of this tank last?

Ans
- ✓ 1. 36 days
- ✗ 2. 20 days
- ✗ 3. 66 days
- ✗ 4. 100 days

Question ID : **630680507667**
Option 1 ID : **6306801984111**
Option 2 ID : **6306801984112**
Option 3 ID : **6306801984110**
Option 4 ID : **6306801984109**
Status : **Answered**
Chosen Option : **1**

Q.4 What is the compound interest on a sum of 11000 at 12% per annum in 2 years, if the interest is compound 8-monthlhy?

Ans
- ✗ 1. Rs. 1860.5
- ✗ 2. Rs. 3275
- ✗ 3. Rs. 2860
- ✓ 4. Rs. 2856.8

Question ID : **630680507641**
Option 1 ID : **6306801984005**
Option 2 ID : **6306801984008**
Option 3 ID : **6306801984006**
Option 4 ID : **6306801984007**
Status : **Answered**
Chosen Option : **2**

Q.5 H.C.F. of 500, 1200 and 1400 is _____.

Ans
✓ 1. 100
✗ 2. 400
✗ 3. 300
✗ 4. 200

Question ID : **630680507645**
Option 1 ID : **6306801984024**
Option 2 ID : **6306801984021**
Option 3 ID : **6306801984022**
Option 4 ID : **6306801984023**
Status : **Answered**
Chosen Option : **1**

Q.6 A shopkeeper sells an article for Rs. 200 with a loss of Rs. 20 %. Find the cost price of the article.

Ans
✗ 1. Rs. 300
✗ 2. Rs. 280
✗ 3. Rs. 260
✓ 4. Rs. 250

Question ID : **630680507650**
Option 1 ID : **6306801984044**
Option 2 ID : **6306801984043**
Option 3 ID : **6306801984042**
Option 4 ID : **6306801984041**
Status : **Answered**
Chosen Option : **4**

Q.7 One car completes journey of 480 km in 12 hours and the other car completes the journey of 550 kms in 11 hours. The ratio of their average speed is

Ans
✓ 1. 4 : 5
✗ 2. 5 : 7
✗ 3. 1 : 2
✗ 4. 3 : 7

Question ID : **630680507657**
Option 1 ID : **6306801984070**
Option 2 ID : **6306801984071**
Option 3 ID : **6306801984069**
Option 4 ID : **6306801984072**
Status : **Answered**
Chosen Option : **1**

Q.8 In a single throw of two dice, what is the probability of getting 3 as a product?

Ans

✗ 1. $\dfrac{4}{18}$

✗ 2. $\dfrac{2}{9}$

✓ 3. $\dfrac{1}{18}$

✗ 4. $\dfrac{1}{36}$

Question ID : **630680507661**
Option 1 ID : **6306801984088**
Option 2 ID : **6306801984086**
Option 3 ID : **6306801984087**
Option 4 ID : **6306801984085**
Status : **Answered**
Chosen Option : **3**

Q.9 Find the selling price if marked price = Rs. 2700 and Discount = 24%

Ans

✗ 1. Rs. 2134

✗ 2. Rs. 2278

✗ 3. Rs. 2256

✓ 4. Rs. 2052

Question ID : **630680507652**
Option 1 ID : **6306801984050**
Option 2 ID : **6306801984052**
Option 3 ID : **6306801984051**
Option 4 ID : **6306801984049**
Status : **Answered**
Chosen Option : **4**

Q.10 If $6x^2 - ax + 12 = ax^2 + 4x + 4$ has only one (repeated) solution, then the positive integral solution of a is:

Ans

✗ 1. 44

✗ 2. 22

✗ 3. 2

✓ 4. 4

Question ID : **630680507664**
Option 1 ID : **6306801984097**
Option 2 ID : **6306801984098**
Option 3 ID : **6306801984099**
Option 4 ID : **6306801984100**
Status : **Answered**
Chosen Option : **4**

Q.11 John is arranging chairs for a seminar, and the chairs are in proportion with numbers 4, 8, and 12. What is the fourth proportional for a new set of chairs?

Ans ✓ 1. 24

✗ 2. 33

✗ 3. 26

✗ 4. 30

Question ID : **630680507653**
Option 1 ID : **6306801984053**
Option 2 ID : **6306801984056**
Option 3 ID : **6306801984054**
Option 4 ID : **6306801984055**
Status : **Answered**
Chosen Option : **1**

Q.12 It is observed that the pipe A can fill the tank in 12 hrs and the same tank is filled by pipe B in 20 hrs. The third pipe C can vacant the tank in 30 hrs. If all the pipes get opened initially and after 8 hrs, the pipe C is closed, then how long will it take to fill the tank?

Ans ✗ 1. 2.5 hrs.

✓ 2. 1.5 hrs.

✗ 3. 4.5 hrs.

✗ 4. 3.5 hrs.

Question ID : **630680507656**
Option 1 ID : **6306801984067**
Option 2 ID : **6306801984068**
Option 3 ID : **6306801984065**
Option 4 ID : **6306801984066**
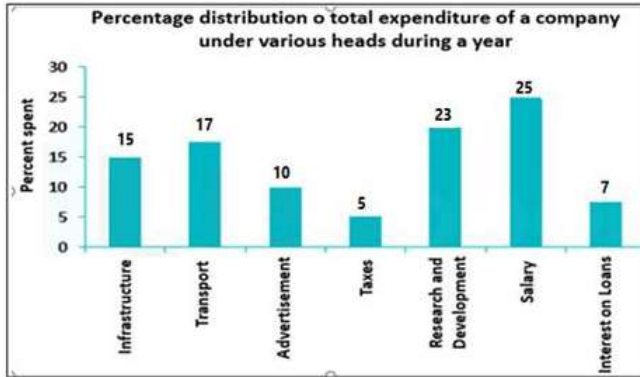Status : **Answered**
Chosen Option : **2**

Q.13 Selling price of 14 candles is same as Cost price of 21 candles. Find the gain percent.

Ans ✗ 1. 66.67%

✓ 2. 50%

✗ 3. 33.33%

✗ 4. $\frac{23}{45}$%

Question ID : **630680507651**
Option 1 ID : **6306801984048**
Option 2 ID : **6306801984046**
Option 3 ID : **6306801984047**
Option 4 ID : **6306801984045**
Status : **Answered**
Chosen Option : **2**

Q.14 If 'A' completes a piece of work in 12 days, which 'B' completes it in 15 days and 'C' takes 10 days to complete the same work. How long will they take to complete the work , if they work together?

Ans
✖ 1. 2 days

✔ 2. 4 days

✖ 3. 8 days

✖ 4. 6 days

Question ID : **630680507655**
Option 1 ID : **6306801984061**
Option 2 ID : **6306801984062**
Option 3 ID : **6306801984064**
Option 4 ID : **6306801984063**
Status : **Answered**
Chosen Option : **2**

Q.15 Tarun borrowed Rs. 28000 from a friend to buy a laptop. He agreed to pay back the loan in 2 years with a simple interest rate of 8% per annum. How much Money will he pay back after 2 years?

Ans
✖ 1. Rs. 25470

✖ 2. Rs. 36490

✖ 3. Rs. 22450

✔ 4. Rs. 32480

Question ID : **630680507640**
Option 1 ID : **6306801984002**
Option 2 ID : **6306801984004**
Option 3 ID : **6306801984001**
Option 4 ID : **6306801984003**
Status : **Answered**
Chosen Option : **4**

Q.16 Study the given graph and answer the question that follows:

Percentage distribution o total expenditure of a company under various heads during a year

What percentage of total expenditure is spent on transportation and infrastructure?

Ans
✔ 1. 32%

✘ 2. 40%

✘ 3. 16%

✘ 4. 24%

Question ID : **630680507644**
Option 1 ID : **6306801984019**
Option 2 ID : **6306801984020**
Option 3 ID : **6306801984017**
Option 4 ID : **6306801984018**
Status : **Answered**
Chosen Option : **1**

Q.17 If the coordinates of a point are (0, -7), then it lies in:

Ans
✘ 1. Between x-axis and y-axis

✔ 2. Y-axis

✘ 3. X-axis

✘ 4. At origin

Question ID : **630680507668**
Option 1 ID : **6306801984116**
Option 2 ID : **6306801984115**
Option 3 ID : **6306801984114**
Option 4 ID : **6306801984113**
Status : **Answered**
Chosen Option : **2**

Q.18 There are 5 friends, and each of them has a different number of marbles. The number of marbles they have is 5, 7, 10, 14, and 19, respectively. What is the average number of marbles per friend?

Ans
✗ 1. 13

✗ 2. 15

✔ 3. 11

✗ 4. 10

Question ID : **630680507638**
Option 1 ID : **6306801983994**
Option 2 ID : **6306801983993**
Option 3 ID : **6306801983995**
Option 4 ID : **6306801983996**
Status : **Answered**
Chosen Option : **3**

Q.19 Height of a cylinder is 4 cm and its radius is 1.4 cm. Curved surface area of cylinder is. Take $(\pi = \frac{22}{7})$

Ans
✗ 1. 34.5 cm^2

✗ 2. 38.9 cm^2

✔ 3. 35.2 cm^2

✗ 4. 42.2 cm^2

Question ID : **630680507665**
Option 1 ID : **6306801984101**
Option 2 ID : **6306801984103**
Option 3 ID : **6306801984102**
Option 4 ID : **6306801984104**
Status : **Answered**
Chosen Option : **3**

Q.20 Find the largest number of 4-digits divisible by 8, 15 and 22

Ans
✗ 1. 9560

✔ 2. 9240

✗ 3. 9820

✗ 4. 9340

Question ID : **630680507646**
Option 1 ID : **6306801984027**
Option 2 ID : **6306801984025**
Option 3 ID : **6306801984028**
Option 4 ID : **6306801984026**
Status : **Answered**
Chosen Option : **2**

Q.21 A solid hemisphere has radius 26 cm. It is melted to form a cylinder such that the ratio of its curved surface area to total surface area is 6 : 15. What is the radius (in cm) of its base.

Ans
✗ 1. 23 cm
✔ 2. 26 cm
✗ 3. 21 cm
✗ 4. 20 cm

Question ID : **630680507666**
Option 1 ID : **6306801984107**
Option 2 ID : **6306801984108**
Option 3 ID : **6306801984106**
Option 4 ID : **6306801984105**
Status : **Answered**
Chosen Option : **3**

Q.22 The price of rice falls by 4.5 %. By what percentage a person can increase the consumption of rice so that his overall budget does not change?

Ans
✔ 1. 4.71%
✗ 2. 2.89%
✗ 3. 3.89%
✗ 4. 3.24%

Question ID : **630680507648**
Option 1 ID : **6306801984036**
Option 2 ID : **6306801984033**
Option 3 ID : **6306801984035**
Option 4 ID : **6306801984034**
Status : **Not Answered**
Chosen Option : **--**

Q.23 $\sqrt{20.25} + \sqrt{9 + (?)^2} = 9.5.$

Ans
✔ 1. 4
✗ 2. 1
✗ 3. 2
✗ 4. 3

Question ID : **630680507647**
Option 1 ID : **6306801984032**
Option 2 ID : **6306801984029**
Option 3 ID : **6306801984030**
Option 4 ID : **6306801984031**
Status : **Answered**
Chosen Option : **1**

Q.24 If the value of $\alpha + \beta = 90^\circ$, and $\alpha : \beta = 2 : 1$, then what is the ratio of $\sin \alpha$ to $\cos \beta$?

Ans
- ✗ 1. $2 : 1$
- ✗ 2. $3 : 4$
- ✗ 3. $4 : 5$
- ✓ 4. $1 : 1$

Question ID : **630680507671**
Option 1 ID : **6306801984125**
Option 2 ID : **6306801984126**
Option 3 ID : **6306801984127**
Option 4 ID : **6306801984128**
Status : **Answered**
Chosen Option : **4**

Q.25 The average weight of 23 workers in the shop is 50 kg. If the weight of the shop manager is included, the average is increased by 2 kg, then what is the weight of the manager?

Ans
- ✓ 1. 98 kg
- ✗ 2. 89 kg
- ✗ 3. 75 kg
- ✗ 4. 78 kg

Question ID : **630680507639**
Option 1 ID : **6306801983997**
Option 2 ID : **6306801983998**
Option 3 ID : **6306801984000**
Option 4 ID : **6306801983999**
Status : **Answered**
Chosen Option : **1**

Q.26 The current birth rate per thousand is 22, whereas corresponding death rate is 7 per thousand. Find the net growth rate in terms of population increase in percent.

Ans
- ✓ 1. 1.5%
- ✗ 2. 0.5%
- ✗ 3. 2%
- ✗ 4. 1%

Question ID : **630680507649**
Option 1 ID : **6306801984038**
Option 2 ID : **6306801984040**
Option 3 ID : **6306801984037**
Option 4 ID : **6306801984039**
Status : **Not Answered**
Chosen Option : --

Q.27 If $a \sin 60° = b \sec 30°$, what is the value of $\frac{a^2}{b^2}$?

Ans

✗ 1. $\frac{9}{16}$

✗ 2. $\frac{3}{4}$

✗ 3. $\frac{4}{3}$

✓ 4. $\frac{16}{9}$

Q.28 A Motorboat covers a certain distance at a speed of 90 kmph in 10 hours. To cover the same distance in 20 hours, It must travel at the speed of?

Ans

✓ 1. 45 kmph
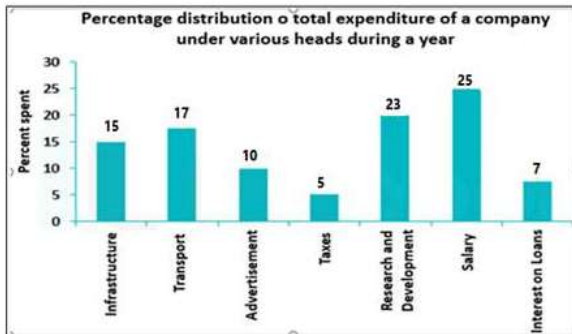
✗ 2. 50 kmph

✗ 3. 48 kmph

✗ 4. 42 kmph

Q.29 In a standard six-sided dice numbered 1 through 6. Each face has an equal probability of landing face up when the die is rolled. If two dice are rolled simultaneously, what is the probability of getting a sum of 7?

Ans

✗ 1. $\frac{36}{7}$

✗ 2. $\frac{3}{6}$

✓ 3. $\frac{1}{6}$

✗ 4. $\frac{7}{36}$

Q.30 Study the given graph and answer the question that follows:

Percentage distribution of total expenditure of a company under various heads during a year

The expenditure of Salary is by what percentage more than the expenditure on transport?

Ans
- ✗ 1. 41.11%
- ✗ 2. 46.23%
- ✗ 3. 45.33%
- ✔ 4. 47.06%

Q.31 The roots of $25x^2 - 10x + 1 = 0$ is:

Ans
- ✗ 1. $\frac{1}{20}$ and $\frac{1}{20}$
- ✗ 2. $\frac{1}{10}$ and $\frac{1}{10}$
- ✗ 3. $\frac{1}{15}$ and $\frac{1}{15}$
- ✔ 4. $\frac{1}{5}$ and $\frac{1}{5}$

Q.32 The father's age is six times his son's age. six years hence, the age of the father will be four times his son's age. The present ages, in years, of the son and the father are, respectively

Ans ✓ 1. 9,54

✗ 2. 4,24

✗ 3. 5,30

✗ 4. 7,42

Question ID : **630680507660**
Option 1 ID : **6306801984081**
Option 2 ID : **6306801984084**
Option 3 ID : **6306801984083**
Option 4 ID : **6306801984082**
Status : **Answered**
Chosen Option : **1**

Q.33 Which of the following is a solution to the equation 4x +8 =6x+2?

Ans ✓ 1. x=3

✗ 2. x=-1

✗ 3. x=5

✗ 4. x=1

Question ID : **630680507659**
Option 1 ID : **6306801984077**
Option 2 ID : **6306801984079**
Option 3 ID : **6306801984080**
Option 4 ID : **6306801984078**
Status : **Answered**
Chosen Option : **1**

Q.34 A sum of money when invested at compound interest for 5 years becomes 8 times of itself. In how many years, the same sum will be 64 times of itself?

Ans ✗ 1. 24 years

✗ 2. 12 years

✓ 3. 10 years

✗ 4. 16 years

Question ID : **630680507642**
Option 1 ID : **6306801984012**
Option 2 ID : **6306801984010**
Option 3 ID : **6306801984009**
Option 4 ID : **6306801984011**
Status : **Answered**
Chosen Option : **3**

Section : **Intellectual Potential Test**

Q.1 Which of the following option will replace the question mark?

73 : 16 :: 95 : ?

Ans ✗ 1. 36

✗ 2. 9

✗ 3. 25

✔ 4. 16

Q.2 Which among the following option is correct on the basis of statement and courses of action?

Statement: About 50% of the students in a state high school board examination have failed due to the question paper being set that is very difficult.

Courses of Action:
I. All the failed students are given a good lesson as they have not done hard work.
II. Tough papers should always be set in board exams.

Ans ✔ 1. Only I follows

✗ 2. Both I and II follow

✗ 3. Only II follows

✗ 4. Neither I nor II follows

Q.3 If 'A' means ' multiplied by'', 'B' means 'divided by', 'C' means 'minus' and 'D' means ''plus''' ', then what will be the value of following expression?

10 A 5 C 24 B 4 D 1 = ?

Ans ✗ 1. 43

✗ 2. 42

✗ 3. 44

✔ 4. 45

Q.4 In a certain code language, WATER is written as RETAW and SALT is written as TLAS. How HYDROGEN will be written in the same code?

Ans ✗ 1. HYDROGEN

✗ 2. HYDRONEG

✗ 3. NEGOHYDR

✓ 4. NEGORDYH

Question ID : **630680507440**
Option 1 ID : **6306801983204**
Option 2 ID : **6306801983202**
Option 3 ID : **6306801983203**
Option 4 ID : **6306801983201**
Status : **Answered**
Chosen Option : **4**

Q.5 If all symbols are removed from the series what will be the 7th element from the right?

K 8 N # 5 B $ H 6 K @ D ^ 6 L # @ 3 L M & 5

Ans ✗ 1. 5

✗ 2. K

✓ 3. D

✗ 4. 6

Question ID : **630680507447**
Option 1 ID : **6306801983230**
Option 2 ID : **6306801983229**
Option 3 ID : **6306801983232**
Option 4 ID : **6306801983231**
Status : **Answered**
Chosen Option : **3**

Q.6 Read the given statement(s) and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statement(s).

Statements:
Some quotes are alphabets.
Some alphabets are words.
All the words are poems.

Conclusions:
I. Some words are alphabets.
II. Some poems are quotes.
III. All the quotes are poems.
IV. Some poems are alphabets.

Ans ✗ 1. Only II and III

✗ 2. Only I and II

✗ 3. Only III and IV

✓ 4. Only I and IV

Question ID : **630680507443**
Option 1 ID : **6306801983214**
Option 2 ID : **6306801983213**
Option 3 ID : **6306801983215**
Option 4 ID : **6306801983216**
Status : **Answered**
Chosen Option : **4**

Q.7 Which of the following pair is similar to the expression below?

32587 : 78523

Ans ✗ 1. 12345 : 12354

✗ 2. 34817 : 71384

✓ 3. 45823 : 32854

✗ 4. 56732 : 23756

Question ID : **630680507465**
Option 1 ID : **6306801983301**
Option 2 ID : **6306801983304**
Option 3 ID : **6306801983302**
Option 4 ID : **6306801983303**
Status : **Answered**
Chosen Option : **3**

Q.8 Find the caretaker Prime Minister of India out of the following listed Prime Ministers?

Ans ✗ 1. Jawahar Lal Nehru

✗ 2. Narendra Modi

✗ 3. Atal Bihari Vajpayee

✓ 4. Gulzari Lal Nanda

Question ID : **630680507455**
Option 1 ID : **6306801983262**
Option 2 ID : **6306801983261**
Option 3 ID : **6306801983264**
Option 4 ID : **6306801983263**
Status : **Answered**
Chosen Option : **4**

Q.9 On the basis of classical dance and folk dance, which of the following options is different from the other three options?

Ans ✓ 1. Bihu

✗ 2. Mohiniattam

✗ 3. Kathakali

✗ 4. Bharatnatyam

Question ID : **630680507454**
Option 1 ID : **6306801983260**
Option 2 ID : **6306801983259**
Option 3 ID : **6306801983258**
Option 4 ID : **6306801983257**
Status : **Answered**
Chosen Option : **2**

Q.10 Which of the following options will replace the question marks based on the cities and their respective countries?

New York : USA :: Saint Petersburg : ?

Ans ✗ 1. Romania

✓ 2. Russia

✗ 3. France

✗ 4. Italy

Question ID : **630680507452**
Option 1 ID : **6306801983252**
Option 2 ID : **6306801983251**
Option 3 ID : **6306801983249**
Option 4 ID : **6306801983250**
Status : **Answered**
Chosen Option : **4**

Q.11 If the rank of a girl in a group is 9th from the top and 18th from the bottom, then how many more girls are required to make the total number of girls in that group 45?

Ans ✗ 1. 16

✗ 2. 17

✗ 3. 18

✓ 4. 19

Question ID : **630680507437**
Option 1 ID : **6306801983189**
Option 2 ID : **6306801983190**
Option 3 ID : **6306801983191**
Option 4 ID : **6306801983192**
Status : **Answered**
Chosen Option : **4**

Q.12 Which of the following option will replace the question mark?

56 : 121 :: 50 : ?

Ans ✗ 1. 36

✗ 2. 49

✓ 3. 25

✗ 4. 81

Question ID : **630680507466**
Option 1 ID : **6306801983306**
Option 2 ID : **6306801983307**
Option 3 ID : **6306801983305**
Option 4 ID : **6306801983308**
Status : **Not Answered**
Chosen Option : **--**

Q.13 One evening just before sunset two boys Sanjiv and Manish were talking to each other face to face. If Manish's shadow was exactly to his left side, which direction was Sanjiv facing?

Ans ✗ 1. East

✓ 2. North

✗ 3. South

✗ 4. West

Question ID : **630680507444**
Option 1 ID : **6306801983217**
Option 2 ID : **6306801983219**
Option 3 ID : **6306801983220**
Option 4 ID : **6306801983218**
Status : **Answered**
Chosen Option : **2**

Q.14 What will come in place of the question marks (?) to make the series given below logically complete?

7, 24, 32, 49, 57, 74, ?

Ans ✓ 1. 82

✗ 2. 91

✗ 3. 99

✗ 4. 98

Question ID : **630680507463**
Option 1 ID : **6306801983293**
Option 2 ID : **6306801983295**
Option 3 ID : **6306801983294**
Option 4 ID : **6306801983296**
Status : **Answered**
Chosen Option : **1**

Q.15 If 'A' means ' multiplied by'', 'B' means 'divided by', 'C' means 'minus' and 'D' means ''plus''' ', then what will be the value of following expression?

11 A 4 C 18 B 6 D 6 = ?

Ans ✗ 1. 51

✓ 2. 47

✗ 3. 45

✗ 4. 42

Question ID : **630680507460**
Option 1 ID : **6306801983284**
Option 2 ID : **6306801983283**
Option 3 ID : **6306801983282**
Option 4 ID : **6306801983281**
Status : **Answered**
Chosen Option : **2**

Q.16 Based on the statement given below, identify the total amount spent by a university in 10 years.

Statement I:- The University purchased 100 items worth Rs 100 in a month.
Statement II:- The University purchased 20 benches for a total of Rs 100 in a month

Ans ✗ 1. Only statement I is required to answer.

✗ 2. Both the statements are insufficient to answer.

✓ 3. Both Statement I and Statement II are required to answer the question.

✗ 4. Only statement II is required to answer.

Question ID : **630680507456**
Option 1 ID : **6306801983265**
Option 2 ID : **6306801983268**
Option 3 ID : **6306801983266**
Option 4 ID : **6306801983267**
Status : **Answered**
Chosen Option : **2**

Q.17 Which among the following option will replace the question mark on the basis of crop and its type?

Rabi : wheat :: Rice : ?

Ans ✗ 1. Both Kharif and Zaid

✓ 2. Kharif

✗ 3. Zaid

✗ 4. Rabi

Question ID : **630680507453**
Option 1 ID : **6306801983256**
Option 2 ID : **6306801983253**
Option 3 ID : **6306801983255**
Option 4 ID : **6306801983254**
Status : **Answered**
Chosen Option : **2**

Q.18 Which among the following option is correct on the basis of statement and courses of action?

Statement: The wheat crops have been affected by the hail storm for the year 2023- 24 in majority of states in India.

Courses of Action:
I. Compensation should be given only to those farmers whose crops are more than 60 percent rotten.
II. The Government should do a proper survey to find out the percentage of wheat crop being rotten.

Ans ✓ 1. Both I and II follow

✗ 2. Only II follows

✗ 3. Neither I nor II follows

✗ 4. Only I follows

Question ID : **630680507458**
Option 1 ID : **6306801983275**
Option 2 ID : **6306801983274**
Option 3 ID : **6306801983276**
Option 4 ID : **6306801983273**
Status : **Answered**
Chosen Option : **2**

Q.19 If K>L>M>N>O, then which among the following is biggest in this series?

Ans
- ✗ 1. N
- ✓ 2. K
- ✗ 3. M
- ✗ 4. O

Question ID : **630680507450**
Option 1 ID : **6306801983243**
Option 2 ID : **6306801983241**
Option 3 ID : **6306801983242**
Option 4 ID : **6306801983244**
Status : **Answered**
Chosen Option : **2**

Q.20 Ranjita is 26th from the top and 8th from the bottom in the class. How many girls are there in the class?

Ans
- ✗ 1. 32
- ✗ 2. 34
- ✗ 3. 36
- ✓ 4. 33

Question ID : **630680507438**
Option 1 ID : **6306801983193**
Option 2 ID : **6306801983195**
Option 3 ID : **6306801983196**
Option 4 ID : **6306801983194**
Status : **Answered**
Chosen Option : **4**

Q.21 Six women Asmita, Vinni, Chanda, Daya, Neerja, and Roshni are sitting in a row facing north. Chanda is sitting immediately between Asmita and Neerja. Vinni is sitting immediately to the right of Neerja. Roshni is not sitting at the right end of the row. If Daya is sitting at the right end of the row, then who is sitting on the immediate right side of Chanda?

Ans
- ✗ 1. Chanda
- ✗ 2. Daya
- ✓ 3. Neerja
- ✗ 4. Vinni

Question ID : **630680507434**
Option 1 ID : **6306801983178**
Option 2 ID : **6306801983180**
Option 3 ID : **6306801983179**
Option 4 ID : **6306801983177**
Status : **Answered**
Chosen Option : **3**

Q.22 How is the husband of the only daughter of Salma's father's wife related to Salma's mother?

Ans ✅ 1. Son in law

❌ 2. Brother

❌ 3. Father in law

❌ 4. Son

Question ID : **630680507441**
Option 1 ID : **6306801983207**
Option 2 ID : **6306801983208**
Option 3 ID : **6306801983205**
Option 4 ID : **6306801983206**
Status : **Answered**
Chosen Option : **1**

Q.23 In a certain code language, SKY is written as 55 and AIR is written as 28. How WATER will be written in the same code?

Ans ❌ 1. 68

❌ 2. 65

❌ 3. 66

✅ 4. 67

Question ID : **630680507439**
Option 1 ID : **6306801983200**
Option 2 ID : **6306801983197**
Option 3 ID : **6306801983198**
Option 4 ID : **6306801983199**
Status : **Answered**
Chosen Option : **4**

Q.24 How many such numbers are there in the series which are immediately followed by letters?

7 @ F 6 # N ! K % 8 $ R 4 % G 4 K6 J @ 8 $ N

Ans ✅ 1. 2

❌ 2. 3

❌ 3. 1

❌ 4. 4

Question ID : **630680507445**
Option 1 ID : **6306801983221**
Option 2 ID : **6306801983224**
Option 3 ID : **6306801983222**
Option 4 ID : **6306801983223**
Status : **Answered**
Chosen Option : **4**

Q.25 Six women Asmita, Vinni, Chanda, Daya, Neerja, and Roshni are sitting in a row facing north. Chanda is sitting immediately between Asmita and Neerja. Vinni is sitting immediately to the right of Neerja. Roshni is not sitting at the right end of the row. If Daya is sitting at the right end of the row, then who is sitting between Asmita and Neerja?

Ans   ✅ 1. Chanda

   ❌ 2. Neerja

   ❌ 3. Vinni

   ❌ 4. Daya

Question ID : **630680507435**
Option 1 ID : **6306801983182**
Option 2 ID : **6306801983183**
Option 3 ID : **6306801983181**
Option 4 ID : **6306801983184**
Status : **Answered**
Chosen Option : **1**

Q.26 Which among the following option is correct on the basis of the statements and conclusions given below (Statement is based on hights of 5 person namely Sunil, Rahul Rakesh, Vikash, Mansi)?

Statement :-
Sunil>Rahul>Rakesh>Vikash>Mansi

Conclusion I:- Rahul is the shortest.
Conclusion II:- Rahul is the tallest.

Ans   ❌ 1. Both conclusion I and II

   ❌ 2. Only II conclusion follow

   ❌ 3. Only I conclusion follow

   ✅ 4. Neither conclusion I nor II

Question ID : **630680507451**
Option 1 ID : **6306801983247**
Option 2 ID : **6306801983246**
Option 3 ID : **6306801983245**
Option 4 ID : **6306801983248**
Status : **Answered**
Chosen Option : **4**

Q.27 Read the given statement(s) and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statement(s).

Statements:
No watermelon is cashew.
No cashew is Mango.
Some apple are mango

Conclusion:
I. No Mango is watermelon
II. No mango is cashew
III. Some cashew are watermelon
IV. All mangoes are watermelon

Ans ✗ 1. Only II

✔ 2. Only I and II

✗ 3. Only I

✗ 4. Only III and IV

Question ID : **630680507442**
Option 1 ID : **6306801983210**
Option 2 ID : **6306801983212**
Option 3 ID : **6306801983209**
Option 4 ID : **6306801983211**
Status : **Answered**
Chosen Option : **1**

Q.28 If 'A' means ' multiplied by'', 'B' means 'divided by', 'C' means 'minus' and 'D' means ''plus''' ', then what will be the value of following expression?

12 A 5 C 16 B 2 D 10 = ?

Ans ✗ 1. 66

✔ 2. 62

✗ 3. 58

✗ 4. 70

Question ID : **630680507461**
Option 1 ID : **6306801983287**
Option 2 ID : **6306801983286**
Option 3 ID : **6306801983285**
Option 4 ID : **6306801983288**
Status : **Answered**
Chosen Option : **2**

Q.29 How many numbers are there in the series which are preceded and followed by symbols?

A @ 5 $ F H & 9 % L 1 & & L 6 ! N 7 H D A$ 6

Ans ✔ 1. 2

✗ 2. 1

✗ 3. 0

✗ 4. 3

Question ID : **630680507449**
Option 1 ID : **6306801983239**
Option 2 ID : **6306801983238**
Option 3 ID : **6306801983237**
Option 4 ID : **6306801983240**
Status : **Answered**
Chosen Option : **1**

Q.30 How many such symbols are there in the series which are immediately preceded and followed by numbers?

D # 5 G 6 3 # 7 @ V $ J 8 % K 3 & H 5 ! N 9 ^

Ans ✔ 1. 1

✘ 2. 0

✘ 3. 3

✘ 4. 2

Question ID : **630680507448**
Option 1 ID : **6306801983234**
Option 2 ID : **6306801983233**
Option 3 ID : **6306801983236**
Option 4 ID : **6306801983235**
Status : **Answered**
Chosen Option : **1**

Q.31 What will come in place of the question marks (?) to make the series given below logically complete?

89, 78, 69, 58, 49, 38, ?

Ans ✘ 1. 18

✘ 2. 28

✘ 3. 37

✔ 4. 29

Question ID : **630680507464**
Option 1 ID : **6306801983300**
Option 2 ID : **6306801983298**
Option 3 ID : **6306801983297**
Option 4 ID : **6306801983299**
Status : **Answered**
Chosen Option : **4**

Q.32 How many such letters are there in the series which are immediately followed by numbers?

$ R 7 N # 7 J $ C 2 % N 3 @ 7 H 8 F $ 7 V # 2

Ans ✘ 1. 6

✔ 2. 4

✘ 3. 5

✘ 4. 3

Question ID : **630680507446**
Option 1 ID : **6306801983228**
Option 2 ID : **6306801983225**
Option 3 ID : **6306801983226**
Option 4 ID : **6306801983227**
Status : **Answered**
Chosen Option : **2**

Q.33 In a class total number of students is 42. From below, Sarita's rank is 26. What is her rank from the top?

Ans ✓ 1. 17

✗ 2. 20

✗ 3. 19

✗ 4. 18

Question ID : **630680507436**
Option 1 ID : **6306801983185**
Option 2 ID : **6306801983188**
Option 3 ID : **6306801983187**
Option 4 ID : **6306801983186**
Status : **Answered**
Chosen Option : **1**

Q.34 What will come in the place of question marks (??) to make the following series logically complete?

ZA 1, YB 11, XC 111, WD 1111, ? ?

Ans ✗ 1. UE 11111

✗ 2. EV 11111

✗ 3. EU 11111

✓ 4. VE 11111

Question ID : **630680507457**
Option 1 ID : **6306801983271**
Option 2 ID : **6306801983270**
Option 3 ID : **6306801983272**
Option 4 ID : **6306801983269**
Status : **Answered**
Chosen Option : **4**

Section : **Domain Knowledge**

Q.1 Which of the following statement is correct regarding an auto – transformer?

I. A part of the winding is common to both the primary and secondary circuits

II. The two windings are not electrically isolated

Ans ✗ 1. Only I

✗ 2. Neither I nor II

✗ 3. Only II

✓ 4. Both I and II

Question ID : **630680506989**
Option 1 ID : **6306801981461**
Option 2 ID : **6306801981464**
Option 3 ID : **6306801981462**
Option 4 ID : **6306801981463**
Status : **Answered**
Chosen Option : **4**

Q.2 A step-down dc chopper has a resistive load of R = 15Ω and input voltage E_{dc} = 200 V. When the chopper remains ON, its voltage drop is 4.5 V. The chopper frequency is 2 kHz. The duty cycle is 50 percent. Determine Average Output voltage.

Ans
- ✗ 1. 200 V
- ✓ 2. 97.75 V
- ✗ 3. 98.75 V
- ✗ 4. 101.5 V

Question ID : **630680507070**
Option 1 ID : **6306801981787**
Option 2 ID : **6306801981786**
Option 3 ID : **6306801981785**
Option 4 ID : **6306801981788**
Status : **Answered**
Chosen Option : **2**

Q.3 The portable instrument which is generally used for testing of installation insulation resistance is an insulation resistance tester _____.

Ans
- ✗ 1. Wattmeter
- ✗ 2. Galvanometer
- ✗ 3. Voltmeter
- ✓ 4. Megger

Question ID : **630680507035**
Option 1 ID : **6306801981645**
Option 2 ID : **6306801981647**
Option 3 ID : **6306801981646**
Option 4 ID : **6306801981648**
Status : **Answered**
Chosen Option : **4**

Q.4 Which of the following statement is correct about distortion factor?

I. The distortion factor indicates the amount of harmonic distortion that remains in a particular waveform after the harmonics of that waveform have been subjected to a second order attenuation

II. Distortion factor is a measure of effectiveness in reducing unwanted harmonics without having to specify the values of a second order load filter

Ans
- ✗ 1. Only II
- ✗ 2. Neither I nor II
- ✗ 3. Only I
- ✓ 4. Both I and II

Question ID : **630680507064**
Option 1 ID : **6306801981762**
Option 2 ID : **6306801981764**
Option 3 ID : **6306801981761**
Option 4 ID : **6306801981763**
Status : **Answered**
Chosen Option : **3**

Q.5 Some outdoor distribution substation transformers are equipped with a tank on the top of the transformer called a
_____ in which expansion and contraction of the oil takes place.

Ans
✔ 1. conservator

✘ 2. reactor

✘ 3. insulator

✘ 4. conductor

Question ID : **630680507012**
Option 1 ID : **6306801981554**
Option 2 ID : **6306801981555**
Option 3 ID : **6306801981553**
Option 4 ID : **6306801981556**
Status : **Answered**
Chosen Option : **1**

Q.6 _____ are designed to have both controlled turn-on and turn-off capability.

Ans
✔ 1. Gate turn-off thyristors

✘ 2. Fast switching thyristors

✘ 3. Phase controlled thyristors

✘ 4. Static induction thyristors

Question ID : **630680507058**
Option 1 ID : **6306801981737**
Option 2 ID : **6306801981739**
Option 3 ID : **6306801981738**
Option 4 ID : **6306801981740**
Status : **Answered**
Chosen Option : **1**

Q.7 Which of the following statement is correct regarding Divergence Theorem?

I. In electrostatics it is also called Gauss's law

II. The divergence theorem helps us in replacing a surface integral by a volume integral and vice versa

Ans
✘ 1. Only I

✘ 2. Neither I nor II

✘ 3. Only II

✔ 4. Both I and II

Question ID : **630680507048**
Option 1 ID : **6306801981697**
Option 2 ID : **6306801981700**
Option 3 ID : **6306801981698**
Option 4 ID : **6306801981699**
Status : **Answered**
Chosen Option : **4**

Q.8 In Potential transformer the secondary winding is designed so that a voltage of _____ is delivered to the instrument load.

Ans
- ✓ 1. 100 to 120 V
- ✗ 2. 160 to 180 V
- ✗ 3. 240 to 260 V
- ✗ 4. 200 to 220 V

Question ID : **630680507042**
Option 1 ID : **6306801981675**
Option 2 ID : **6306801981676**
Option 3 ID : **6306801981673**
Option 4 ID : **6306801981674**
Status : **Answered**
Chosen Option : **4**

Q.9 Which of the following is correct regarding distribution transformer?

I. Distribution transformers connect the primary system (2.4 to 34.5 kV) to the secondary system (480 V and lower)

II. Distribution transformers may be installed outdoors on overhead poles (pole-mount), outdoors at ground level on pads (padmount transformers), indoors within buildings, or underground in manholes and vaults

Ans
- ✗ 1. Only I
- ✗ 2. Neither I nor II
- ✓ 3. Both I and II
- ✗ 4. Only II

Question ID : **630680507013**
Option 1 ID : **6306801981557**
Option 2 ID : **6306801981560**
Option 3 ID : **6306801981559**
Option 4 ID : **6306801981558**
Status : **Answered**
Chosen Option : **1**

Q.10 Which of the following is true regarding Kirchhoff's voltage law (KVL)?

I. The sum of the rises of potential around any closed circuit equals the sum of the drops of potential in that circuit

II. General expression of KVL is $\sum_{J=1}^{k} V_J = 0$ (where, V_J represent the voltage drop of the element in any given closed circuit which is assumed to have 'k' element)

Ans
- ✗ 1. Only I
- ✗ 2. Neither I nor II
- ✓ 3. Both I and II
- ✗ 4. Only II

Question ID : **630680507019**
Option 1 ID : **6306801981581**
Option 2 ID : **6306801981584**
Option 3 ID : **6306801981583**
Option 4 ID : **6306801981582**
Status : **Answered**
Chosen Option : **3**

Q.11 Which of the following equation is correct regarding following circuit diagram?
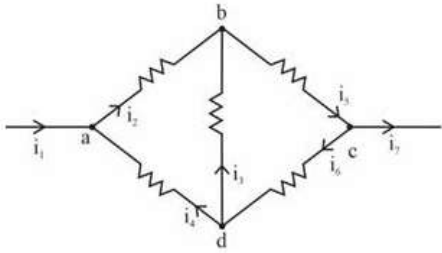
I. At node 'a' $i_1 + i_4 = i_2$

II. At node 'c' $i_5 = i_6 + i_7$

III. At node 'b' $i_2 + i_3 = i_5$

Ans ✗ 1. Only I

✗ 2. Only I and III

✗ 3. Only I and II

✔ 4. I, II and III

Question ID : **630680507020**
Option 1 ID : **6306801981585**
Option 2 ID : **6306801981587**
Option 3 ID : **6306801981586**
Option 4 ID : **6306801981588**
Status : **Answered**
Chosen Option : **4**

Q.12 The insulating layer between a capacitors plate is commonly called _____.

Ans ✔ 1. dielectric

✗ 2. diode

✗ 3. dimagnetic

✗ 4. bipolar plate

Question ID : **630680507056**
Option 1 ID : **6306801981729**
Option 2 ID : **6306801981732**
Option 3 ID : **6306801981730**
Option 4 ID : **6306801981731**
Status : **Answered**
Chosen Option : **1**

Q.13 Which of the following statement is correct regarding 'The permittivity of medium' in coulomb's law?

I. The permittivity of the medium also called dielectric constant

II. The permittivity of a medium is $\varepsilon = \varepsilon_r \varepsilon_0$

Ans
- ✔ 1. Both I and II
- ✘ 2. Neither I nor II
- ✘ 3. Only II
- ✘ 4. Only I

Question ID : **630680507051**
Option 1 ID : **6306801981711**
Option 2 ID : **6306801981712**
Option 3 ID : **6306801981710**
Option 4 ID : **6306801981709**
Status : **Answered**
Chosen Option : **1**

Q.14 Which of the following statement is correct?

I. Short-circuit (SC) Test: This test serves the purpose of determining the series parameters of a transformer

II. Open-circuit (OC) or No-load Test: The purpose of this test is to determine the shunt branch parameters of the equivalent circuit of the transformer

Ans
- ✘ 1. Neither I nor II
- ✘ 2. Only I
- ✔ 3. Both I and II
- ✘ 4. Only II

Question ID : **630680507001**
Option 1 ID : **6306801981512**
Option 2 ID : **6306801981509**
Option 3 ID : **6306801981511**
Option 4 ID : **6306801981510**
Status : **Answered**
Chosen Option : **3**

Q.15 Which of the following statement is correct regarding cooling method of transformer?

I. Oil-immersed self-cooled: In this type the whole transformer is immersed in a tank of oil

II. Oil-immersed force cooled: In this type a plain tank is used and oil is cooled artificially, either by tube immersed in oil through which cool water is forced or preferably by circulating the oil by a pump through an extra cooler

Ans
- ✔ 1. Both I and II
- ✘ 2. Neither I nor II
- ✘ 3. Only I
- ✘ 4. Only II

Question ID : **630680506991**
Option 1 ID : **6306801981471**
Option 2 ID : **6306801981472**
Option 3 ID : **6306801981469**
Option 4 ID : **6306801981470**
Status : **Answered**
Chosen Option : **1**

Q.16 The dynamometer type wattmeter consists of _____ fixed current coils connected in series with the load.

Ans
- ✔ 1. Two
- ✘ 2. Four
- ✘ 3. Three
- ✘ 4. Five

Question ID : **630680507038**
Option 1 ID : **6306801981657**
Option 2 ID : **6306801981659**
Option 3 ID : **6306801981658**
Option 4 ID : **6306801981660**
Status : **Answered**
Chosen Option : **1**

Q.17 Differential relays are commonly used to protect transformers with ratings larger than _____.

Ans
- ✘ 1. 25 MVA
- ✘ 2. 15 MVA
- ✔ 3. 10 MVA
- ✘ 4. 20 MVA

Question ID : **630680507016**
Option 1 ID : **6306801981572**
Option 2 ID : **6306801981570**
Option 3 ID : **6306801981569**
Option 4 ID : **6306801981571**
Status : **Not Answered**
Chosen Option : **--**

Q.18 A relay that operates on the basis of voltage-to-current ratio is called an _____.

Ans
- ✘ 1. current relay
- ✘ 2. conductor relay
- ✘ 3. voltage relay
- ✔ 4. impedance relay

Question ID : **630680507015**
Option 1 ID : **6306801981565**
Option 2 ID : **6306801981568**
Option 3 ID : **6306801981566**
Option 4 ID : **6306801981567**
Status : **Answered**
Chosen Option : **4**

Q.19 Which of the following is correct regarding transformer oil?

I. Oil used in transformer is of mineral origin and is extracted from natural petroleum

II. The electric strength of oil depends almost entirely on its freedom from moisture and suspended fibrous particle and a test for electric strength is virtually a test for purity in this respect

Ans

✗ 1. Only II

✗ 2. Only I

✔ 3. Both I and II

✗ 4. Neither I nor II

Question ID : **630680507033**
Option 1 ID : **6306801981638**
Option 2 ID : **6306801981637**
Option 3 ID : **6306801981639**
Option 4 ID : **6306801981640**
Status : **Answered**
Chosen Option : **2**

Q.20 Which of following statement is correct regarding working of nuclear power stations?

I. A nuclear power station is just like a thermal power station in which the nuclear reactor replaces the steam boiler

II. The fundamental process in a nuclear reactor is the chain reaction of fissile material

Ans

✔ 1. Both I and II

✗ 2. Only II

✗ 3. Only I

✗ 4. Neither I nor II

Question ID : **630680507018**
Option 1 ID : **6306801981579**
Option 2 ID : **6306801981578**
Option 3 ID : **6306801981577**
Option 4 ID : **6306801981580**
Status : **Answered**
Chosen Option : **2**

Q.21 Which of following statement is correct regarding working of hydroelectric power stations?

I. Plant is simpler and maintenance is minimum

II. The running charges of stations are very small

Ans

✗ 1. Only II

✗ 2. Neither I nor II

✔ 3. Both I and II

✗ 4. Only I

Question ID : **630680507017**
Option 1 ID : **6306801981574**
Option 2 ID : **6306801981576**
Option 3 ID : **6306801981575**
Option 4 ID : **6306801981573**
Status : **Answered**
Chosen Option : **1**

Q.22 In half-bridge inverter what is the value of root-mean-square (rms) output voltage? (where V_s = reverse voltage)

Ans

✖ 1. $V_0 = \dfrac{V_s}{4}$

✖ 2. $V_0 = 4V_s$

✖ 3. $V_0 = 2V_s$

✔ 4. $V_0 = \dfrac{V_s}{2}$

Q.23 Which of the following statement is correct?

I. Transient response of an electrical circuit can best be described by a linear differential equation

II. Laplace transformation is a very powerful method of solving linear differential equations

Ans

✖ 1. Only II

✖ 2. Neither I nor II

✔ 3. Both I and II

✖ 4. Only I

Q.24 Which of the following statement is correct regarding 'Divergence Theorem'?

I. The divergence theorem applies to any volume 'V' that is bounded by surface 'S'

II. The direction of 'ds' is always that of the outward normal, perpendicular to the surface 'ds' and directed away from the volume

Ans

✖ 1. Neither I nor II

✖ 2. Only II

✔ 3. Both I and II

✖ 4. Only I

Q.25 A step-up chopper is used to deliver load voltage of 400 V from a 200 V d.c. source, if the blocking period of the thyristor is 80 µs, compute the required pulse width.

Ans
- ✓ 1. 80 µs
- ✗ 2. 160 µs
- ✗ 3. 500 µs
- ✗ 4. 200 µs

Question ID : **630680507066**
Option 1 ID : **6306801981770**
Option 2 ID : **6306801981769**
Option 3 ID : **6306801981772**
Option 4 ID : **6306801981771**
Status : **Answered**
Chosen Option : **1**

Q.26 Which of the following is correct regarding Laplace transform?

I. Laplace transformation also provides the direct solution of non-homogenous differential equations

II. This method automatically takes care of initial conditions without the necessity of first determining the general solution and then obtain from it a particular solution

Ans
- ✗ 1. Only II
- ✓ 2. Both I and II
- ✗ 3. Neither I nor II
- ✗ 4. Only I

Question ID : **630680507026**
Option 1 ID : **6306801981610**
Option 2 ID : **6306801981611**
Option 3 ID : **6306801981612**
Option 4 ID : **6306801981609**
Status : **Answered**
Chosen Option : **2**

Q.27 Ampere's circuital law is analogous to gauss's law in electrostatics and is very helpful in determining the magnetic field around a current carrying conductor for _____ configurations.

Ans
- ✗ 1. variable
- ✗ 2. constant
- ✓ 3. symmetrical
- ✗ 4. asymmetrical

Question ID : **630680507054**
Option 1 ID : **6306801981721**
Option 2 ID : **6306801981724**
Option 3 ID : **6306801981722**
Option 4 ID : **6306801981723**
Status : **Not Answered**
Chosen Option : **--**

Q.28 Maximum efficiency in Transformer occurs when _____.

Ans

✗ 1. variable ohmic loss × fixed core loss = 1

✓ 2. variable ohmic loss = fixed core loss

✗ 3. variable ohmic loss − fixed core loss = 1

✗ 4. variable ohmic loss + fixed core loss = 1

Question ID : **630680506988**
Option 1 ID : **6306801981460**
Option 2 ID : **6306801981457**
Option 3 ID : **6306801981458**
Option 4 ID : **6306801981459**
Status : **Answered**
Chosen Option : **2**

Q.29 HVDC transmission system needs only _____ conductors and therefore the power losses in a DC line are lesser than the losses in AC line of the same power transfer capability.

Ans

✓ 1. Two

✗ 2. Five

✗ 3. Four

✗ 4. Three

Question ID : **630680507004**
Option 1 ID : **6306801981521**
Option 2 ID : **6306801981524**
Option 3 ID : **6306801981523**
Option 4 ID : **6306801981522**
Status : **Answered**
Chosen Option : **1**

Q.30 In the frequency domain network having 'n–principal' nodes one of them is designated as the reference node and we require _____ node voltage equation to solve for the desired result.

Ans

✗ 1. (n−2)

✗ 2. n

✗ 3. (n−3)

✓ 4. (n−1)

Question ID : **630680507032**
Option 1 ID : **6306801981635**
Option 2 ID : **6306801981633**
Option 3 ID : **6306801981636**
Option 4 ID : **6306801981634**
Status : **Answered**
Chosen Option : **4**

Q.31 Which of the following method is the method of measurement of high resistance?

I. Direct deflection method

II. Megohm bridge

Ans
✗ 1. Only II

✗ 2. Neither I nor II

✗ 3. Only I

✔ 4. Both I and II

Question ID : **630680507045**
Option 1 ID : **6306801981686**
Option 2 ID : **6306801981688**
Option 3 ID : **6306801981685**
Option 4 ID : **6306801981687**
Status : **Not Answered**
Chosen Option : **--**

Q.32 Which of the following pair is correct?

I. Squirrel cage induction motor – maintenance is very low

II. Slipring induction motor – maintenance is high because there are brushes, brush gears etc.

Ans
✔ 1. Both I and II

✗ 2. Only II

✗ 3. Neither I nor II

✗ 4. Only I

Question ID : **630680506993**
Option 1 ID : **6306801981479**
Option 2 ID : **6306801981478**
Option 3 ID : **6306801981480**
Option 4 ID : **6306801981477**
Status : **Answered**
Chosen Option : **1**

Q.33 Which of the following is correct regarding Potential transformer?

I. Potential transformer are used to operate voltmeters, the potential coils of wattmeters and relays from high voltage lines

II. The design of a potential transformer is quite similar to that of a power transformer but the loading of a potential transformer is always small, sometimes only a few volt-ampere

Ans
✗ 1. Neither I nor II

✗ 2. Only I

✗ 3. Only II

✔ 4. Both I and II

Question ID : **630680507041**
Option 1 ID : **6306801981672**
Option 2 ID : **6306801981669**
Option 3 ID : **6306801981670**
Option 4 ID : **6306801981671**
Status : **Answered**
Chosen Option : **4**

Q.34 If the resistance in 'Δ' connected resistive network is R_1, R_2, R_3 as shown in the figure,
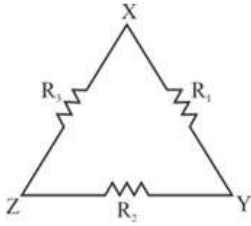
then what will be the value of resistance 'R_x' in equivalent star network like?
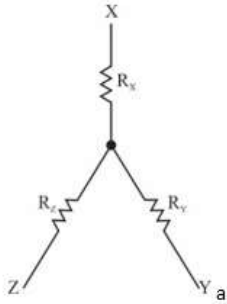
Ans

✗ 1. $R_X = \dfrac{R_1 R_2}{R_1 + R_2 + R_3}$

✔ 2. $R_X = \dfrac{R_1 R_3}{R_1 + R_2 + R_3}$

✗ 3. $R_X = R_Y = R_Z$

✗ 4. $R_X = \dfrac{R_2 R_3}{R_1 + R_2 + R_3}$

Question ID : 630680507024
Option 1 ID : 6306801981602
Option 2 ID : 6306801981601
Option 3 ID : 6306801981604
Option 4 ID : 6306801981603
Status : **Answered**
Chosen Option : **2**

Q.35 A chopper circuit is operating on TRC principle at a frequency of 80 Hz on a 20 V d.c supply. If the load voltage is 200 V, compute the conduction period of thyristor in each cycle.

Ans

✗ 1. 0.5s

✗ 2. 0.20s

✔ 3. 0.125s

✗ 4. 0.45s

Question ID : 630680507067
Option 1 ID : 6306801981773
Option 2 ID : 6306801981774
Option 3 ID : 6306801981775
Option 4 ID : 6306801981776
Status : **Answered**
Chosen Option : **3**

Q.36 Directional relays are designed to operate for fault currents in only _____.

Ans   ✗ 1. four direction

✓ 2. one direction

✗ 3. three direction

✗ 4. two direction

Question ID : **630680507014**
Option 1 ID : **6306801981564**
Option 2 ID : **6306801981561**
Option 3 ID : **6306801981563**
Option 4 ID : **6306801981562**
Status : **Answered**
Chosen Option : **4**

Q.37 Which of the following statement is true about Thyristor?

I. A thyristor is a four layer semiconductor device of pnpn structure with three p n- junctions

II. It has three terminals anode, cathode, and gate

Ans   ✓ 1. Both I and II

✗ 2. Only I

✗ 3. Only II

✗ 4. Neither I nor II

Question ID : **630680507059**
Option 1 ID : **6306801981743**
Option 2 ID : **6306801981741**
Option 3 ID : **6306801981742**
Option 4 ID : **6306801981744**
Status : **Answered**
Chosen Option : **1**

Q.38 The cardinal requirements for transformer oil are _____ and freedom from tendency to sludging.

Ans   ✓ 1. high electric strength

✗ 2. constant electric strength

✗ 3. low electric strength

✗ 4. zero electric strength

Question ID : **630680507034**
Option 1 ID : **6306801981641**
Option 2 ID : **6306801981644**
Option 3 ID : **6306801981642**
Option 4 ID : **6306801981643**
Status : **Answered**
Chosen Option : **1**

Q.39 The auto-transformer is cheaper in cost, since there is a saving in copper as compared to a conventional two-winding transformer, it can be proved as follows _____.

Ans ✗ 1.

The volume of copper used = (cross-sectional area) + (length of the conductor used for windings)

✗ 2.

The volume of copper used = (cross-sectional area) – (length of the conductor used for windings)

✗ 3.

The volume of copper used = (cross-sectional area) / (length of the conductor used for windings)

✔ 4.

The volume of copper used = (cross-sectional area) × (length of the conductor used for windings)

Q.40 Which of following statement is correct regarding De Sauty's Bridge?

I. The bridge is the simplest method of comparing two capacitances.

II. The advantage of the De Sauty's Bridge is its simplicity but this advantage is nullified by the fact that it is impossible to obtain balance if both the capacitors are not free from di-electric loss

Ans ✗ 1. Only II

✗ 2. Neither I nor II

✔ 3. Both I and II

✗ 4. Only I

Q.41 Choose the correct pair.

I. Power MOSFET – It is a voltage controlled device and requires only a small input current

II. IGBT – There in no second breakdown problem as with BJTs

Ans ✔ 1. Both I and II

✗ 2. Only I

✗ 3. Neither I nor II

✗ 4. Only II

Q.42 _____ are used in automobiles as starter motors.

Ans

✗ 1. Compound motors

✗ 2. Series motors

✔ 3. Permanent magnet DC motors

✗ 4. Shunt motors

Question ID : 630680507002
Option 1 ID : 6306801981515
Option 2 ID : 6306801981514
Option 3 ID : 6306801981516
Option 4 ID : 6306801981513
Status : Answered
Chosen Option : 2

Q.43 Assertion(A) : An IGBT combines the advantages of BJTs and MOSFETs.

Reason(R) : An IGBT has high input impedence, like–MOSFETs and low on-state conduction losses like BJTs.

Ans

✗ 1. Both A and R is true, and R is not the correct explanation of A.

✔ 2. Both A and R is true, and R is the correct explanation of A.

✗ 3. A is false but R is true.

✗ 4. A is true but R is false.

Question ID : 630680507060
Option 1 ID : 6306801981746
Option 2 ID : 6306801981747
Option 3 ID : 6306801981748
Option 4 ID : 6306801981745
Status : Answered
Chosen Option : 2

Q.44 Laplace transformation of a function f(t) is defined as _____.

Ans

✗ 1. $\int_0^\infty \frac{1}{f(t)e^{st}} dt$

✔ 2. $\int_0^\infty f(t)\, e^{-st} dt$

✗ 3. $\int_0^\infty f(t)\, e^{st} dt$

✗ 4. $\int_0^\infty \frac{1}{f(t)e^{-st}} dt$

Question ID : 630680507027
Option 1 ID : 6306801981616
Option 2 ID : 6306801981613
Option 3 ID : 6306801981614
Option 4 ID : 6306801981615
Status : Answered
Chosen Option : 2

Q.45 Laplace transform of exponential function is described by _____.

Ans

✔ 1. $f(t) = e^{-\alpha t}$

✘ 2. $f(t) = \dfrac{1}{e^{\alpha t}}$

✘ 3. $f(t) = e^{\alpha t}$

✘ 4. $f(t) = \dfrac{1}{e^{-\alpha t}}$

Q.46 Compound DC motors are used for _____.

I. Pulsating loads needing flywheel action

II. Plunger pumps

III. Shears and conveyors

Ans

✘ 1. Only I and II

✘ 2. Only I and III

✔ 3. I, II and III

✘ 4. Only I

Q.47 A chopper circuit is operating on TRC principle at a frequency of 2 Hz on a 220 V d.c supply. If the load voltage is 170 V, compute the chopping period of thyristor in each cycle.

Ans

✘ 1. 0.25s

✘ 2. 3s

✘ 3. 2s

✔ 4. 0.5s

Q.48 Many distribution substation transformers have Load tap changers (LTCs) because _____.

Ans ✗ 1.
Load tap changers (LTCs) manually regulate frequency levels based on loading conditions

✓ 2.
Load tap changers (LTCs) automatically regulate voltage levels based on loading conditions

✗ 3.
Load tap changers (LTCs) does not regulate voltage levels based on loading conditions

✗ 4.
Load tap changers (LTCs) manually regulate voltage levels based on loading conditions

Question ID : **630680507011**
Option 1 ID : **6306801981552**
Option 2 ID : **6306801981549**
Option 3 ID : **6306801981551**
Option 4 ID : **6306801981550**
Status : **Answered**
Chosen Option : **4**

Q.49 Which of the following pair is correct?

I. Single-pulse-width modulation control – There is only one pulse per half cycle and the width of the pulse is varied to control the inverter output voltage

II. Multiple-pulse-width modulation – The harmonic content can be reduced by using several pulses in each half-cycle of output voltage

Ans ✗ 1. Only II

✓ 2. Both I and II

✗ 3. Neither I nor II

✗ 4. Only I

Question ID : **630680507062**
Option 1 ID : **6306801981754**
Option 2 ID : **6306801981755**
Option 3 ID : **6306801981756**
Option 4 ID : **6306801981753**
Status : **Answered**
Chosen Option : **2**

Q.50 In DC series motor the starting torque is very high, up to _____ the full-load torque.

Ans ✗ 1. three times

✓ 2. five times

✗ 3. two times

✗ 4. four times

Question ID : **630680506995**
Option 1 ID : **6306801981486**
Option 2 ID : **6306801981488**
Option 3 ID : **6306801981485**
Option 4 ID : **6306801981487**
Status : **Answered**
Chosen Option : **2**

Q.51 A DC shunt motor has a _____ starting torque.

Ans
- ✗ 1. minimum
- ✗ 2. zero
- ✔ 3. medium
- ✗ 4. maximum

Q.52 Which of the following is stated as 'final value theorem'?

Ans
- ✗ 1. $\lim_{s\to\infty}[sF(s)] = \lim_{t\to 0}f(t)$
- ✗ 2. $\lim_{s\to\infty}[sF(s)] = \lim_{t\to 0}\dfrac{1}{f(f)}$
- ✗ 3. $\lim_{s\to 0}[sF(s)] = \lim_{t\to\infty}\dfrac{1}{f(f)}$
- ✔ 4. $\lim_{s\to 0}[sF(s)] = \lim_{t\to\infty}f(t)$

Q.53 The corona loss is directly proportional to _____ where 'f' is the supply frequency, so corona loss in DC system are lesser than those in AC systems for the same conductor diameter and operating voltage.

Ans
- ✗ 1. $1/(f-25)$
- ✗ 2. $1/(f+25)$
- ✗ 3. $(f-25)$
- ✔ 4. $(f+25)$

Q.54 In determining the relative polarity of the two-windings of a transformer the two windings are connected in _____ while one of the windings is excited from a suitable voltage source.

Ans

✗ 1. parallel across a voltmeter

✔ 2. series across a voltmeter

✗ 3. series across with galvanometer

✗ 4. parallel across with galvanometer

Question ID : **630680507000**
Option 1 ID : **6306801981506**
Option 2 ID : **6306801981505**
Option 3 ID : **6306801981507**
Option 4 ID : **6306801981508**
Status : **Answered**
Chosen Option : **2**

Q.55 Which of the following statement is correct about Slipring induction motor?

I. Starting torque is higher and is three times the full load torque

II. Starting current is lower and is two times the full load current

Ans

✗ 1. Only II

✗ 2. Neither I nor II

✗ 3. Only I

✔ 4. Both I and II

Question ID : **630680506994**
Option 1 ID : **6306801981482**
Option 2 ID : **6306801981484**
Option 3 ID : **6306801981481**
Option 4 ID : **6306801981483**
Status : **Answered**
Chosen Option : **3**

Q.56 Which of the following statement is correct about IGBT?

I. The switching speed of IGBTs is inferior to that of MOSFETs.

II. IGBTs are finding increasing applications in medium-power applications such as dc and ac motor drives, power supplies, solid-state relays and contractors.

Ans

✔ 1. Both I and II

✗ 2. Neither I nor II

✗ 3. Only I

✗ 4. Only II

Question ID : **630680507072**
Option 1 ID : **6306801981795**
Option 2 ID : **6306801981796**
Option 3 ID : **6306801981793**
Option 4 ID : **6306801981794**
Status : **Answered**
Chosen Option : **1**

Q.57 Which of the following statement is correct regarding Induction type wattmeter?

I. Induction type wattmeter consists of two electromagnets

II. A thin aluminium disc is mounted between two magnets

Ans ✓ 1. Both I and II

✗ 2. Neither I nor II

✗ 3. Only II

✗ 4. Only I

Question ID : **630680507039**
Option 1 ID : **6306801981663**
Option 2 ID : **6306801981664**
Option 3 ID : **6306801981662**
Option 4 ID : **6306801981661**
Status : **Answered**
Chosen Option : **1**

Q.58 Which of the following is correct regarding secondary distribution?

I. Secondary distribution distributes energy at customer utilization voltages from distribution transformers up to meters at customer's premises

II. In residential areas, 120/240-V, single-phase, three-wire service is the most common, where lighting loads and outlets are supplied by 120-V, single-phase connections, and large household appliances such as electric ranges, clothes dryers, water heaters, and electric space heating are supplied by 240-V, single-phase connections

Ans ✗ 1. Neither I nor II

✗ 2. Only I

✗ 3. Only II

✓ 4. Both I and II

Question ID : **630680507010**
Option 1 ID : **6306801981548**
Option 2 ID : **6306801981545**
Option 3 ID : **6306801981546**
Option 4 ID : **6306801981547**
Status : **Answered**
Chosen Option : **4**

Q.59 In the context of megger, the voltage range of the instrument can be controlled by a voltage selector switch. This can be done by _____ with the current coil.

Ans ✗ 1. varying resistance 'r' connected in parallel

✓ 2. varying resistance 'r' connected in series

✗ 3. constant resistance 'r' connected in parallel

✗ 4. constant resistance 'r' connected in series

Question ID : **630680507037**
Option 1 ID : **6306801981654**
Option 2 ID : **6306801981653**
Option 3 ID : **6306801981656**
Option 4 ID : **6306801981655**
Status : **Answered**
Chosen Option : **2**

Q.60 Which of the following statement is correct about capacitors?

I. The capacitors sometimes referred to as a condenser , is a simple passive device that is used to store electricity

II. Due to insulating layer DC current cannot flow through the capacitor as it blocks it allowing instead a voltage to be present across the plates in the form of an electrical charge

Ans
   ✗ 1. Only II

   ✗ 2. Neither I nor II

   ✗ 3. Only I

   ✓ 4. Both I and II

Question ID : **630680507057**
Option 1 ID : **6306801981734**
Option 2 ID : **6306801981736**
Option 3 ID : **6306801981733**
Option 4 ID : **6306801981735**
Status : **Answered**
Chosen Option : **4**

Q.61 What is the S.I. unit of the permittivity of the medium in Coulomb's law?

Ans
   ✗ 1. F.m

   ✗ 2. $\dfrac{F}{m^2}$

   ✗ 3. F.m^2

   ✓ 4. $\dfrac{F}{m}$

Question ID : **630680507050**
Option 1 ID : **6306801981705**
Option 2 ID : **6306801981708**
Option 3 ID : **6306801981706**
Option 4 ID : **6306801981707**
Status : **Answered**
Chosen Option : **4**

Q.62 Which of the following statement is correct regarding DC shunt motor?

I. At low speeds, DC shunt motors are comparable with synchronous motors.

II. The outstanding feature of a DC shunt motor however is its superb wide range flexible speed control above and below the base speed using solid-state controlled rectifiers.

Ans
   ✓ 1. Both I and II

   ✗ 2. Only II

   ✗ 3. Neither I nor II

   ✗ 4. Only I

Question ID : **630680506998**
Option 1 ID : **6306801981499**
Option 2 ID : **6306801981498**
Option 3 ID : **6306801981500**
Option 4 ID : **6306801981497**
Status : **Answered**
Chosen Option : **2**

Q.63 Which of the following statement is correct regarding 'Mesh Analysis'?

I. The mesh current analysis technique is applied for all networks with independent sources or networks with dependent sources where the controlling variables are not a part of the network under investigation

II. If the controlling variable is part of the network being examined additional care must be taken when applying the mesh current analysis technique

Ans

✗ 1. Only II

✗ 2. Neither I nor II

✓ 3. Both I and II

✗ 4. Only I

Question ID : **630680507031**
Option 1 ID : **6306801981630**
Option 2 ID : **6306801981632**
Option 3 ID : **6306801981631**
Option 4 ID : **6306801981629**
Status : **Answered**
Chosen Option : **2**

Q.64 The ratio of voltage across the whole string and the product of the number of units and voltage across the unit nearest to the line conductor is known as _____.

Ans

✓ 1. string efficiency

✗ 2. shunt capacitance

✗ 3. stray capacitance

✗ 4. individual efficiency

Question ID : **630680507009**
Option 1 ID : **6306801981541**
Option 2 ID : **6306801981543**
Option 3 ID : **6306801981542**
Option 4 ID : **6306801981544**
Status : **Answered**
Chosen Option : **1**

Q.65 Which of the following is correct about Power MOSFET?

I. The switching speed is very high and the switching times are of the order of nano-seconds.

II. Power MOSFETs find increasing applications in low-power high frequency converters.

Ans

✓ 1. Both I and II

✗ 2. Neither I nor II

✗ 3. Only I

✗ 4. Only II

Question ID : **630680507071**
Option 1 ID : **6306801981791**
Option 2 ID : **6306801981792**
Option 3 ID : **6306801981789**
Option 4 ID : **6306801981790**
Status : **Answered**
Chosen Option : **1**

Q.66 Which of the following is the integral form of Biot–Savart law? (where Idl = Current I passing from an infinitesimal small length of conductor dl; 1_r = Unit vector from the current element Idl towards the point of interest; H = Magnetic field intensity; r = Distance between the current element and the point)

Ans

✗ 1. $H = \oint \dfrac{Idl \times 1_r}{\pi r^2}$

✗ 2. $H = \oint Idl \times 1_r \times 4\pi r^2$

✔ 3. $H = \oint \dfrac{Idl \times 1_r}{4\pi r^2}$

✗ 4. $H = \oint \dfrac{Idl \times 1_r}{2\pi r^2}$

Question ID : **630680507052**
Option 1 ID : **6306801981715**
Option 2 ID : **6306801981716**
Option 3 ID : **6306801981713**
Option 4 ID : **6306801981714**
Status : **Answered**
Chosen Option : **4**

Q.67 Which of the following equation is correct regarding divergence theorem?

Ans

✗ 1. $\displaystyle\int_s (\nabla . A) ds = \oint_v A . dv$

✗ 2. $\displaystyle\int_v (\nabla . \frac{1}{A}) dv = \oint_s \frac{1}{A} . ds$

✔ 3. $\displaystyle\int_v (\nabla . A) dv = \oint_s A . ds$

✗ 4. $\displaystyle\int_v (\nabla . \frac{1}{A}) dv = \oint_s A . d$

Question ID : **630680507046**
Option 1 ID : **6306801981690**
Option 2 ID : **6306801981691**
Option 3 ID : **6306801981689**
Option 4 ID : **6306801981692**
Status : **Answered**
Chosen Option : **1**

Q.68 Which of the following statement is correct regarding Ampere's circuital law?

I. The law can be applied inside a conductor or outside it but total current enclosed by the path should be known

II. The law is applicable for line currents, sheet currents or volume currents

Ans
- ✗ 1. Only II
- ✗ 2. Neither I nor II
- ✓ 3. Both I and II
- ✗ 4. Only I

Question ID : **630680507055**
Option 1 ID : **6306801981726**
Option 2 ID : **6306801981728**
Option 3 ID : **6306801981727**
Option 4 ID : **6306801981725**
Status : **Answered**
Chosen Option : **3**

Q.69 Ampere's circuital law states that

_____.

Ans
- ✗ 1.
the line integral of h along any closed path is exactly opposite to the direct current enclosed by the path
- ✗ 2.
the line integral of h along any closed path is exactly opposite to the indirect current enclosed by the path
- ✓ 3.
the line integral of h along any closed path is exactly equal to the direct current enclosed by the path
- ✗ 4.
the line integral of h along any closed path is exactly equal to the indirect current enclosed by the path

Question ID : **630680507053**
Option 1 ID : **6306801981718**
Option 2 ID : **6306801981720**
Option 3 ID : **6306801981717**
Option 4 ID : **6306801981719**
Status : **Answered**
Chosen Option : **3**

Q.70 Current transformers are always used with the _____ closed through ammeters, wattmeter current coils, or relay coils.

Ans
- ✗ 1. primary winding circuit
- ✓ 2. secondary winding circuit
- ✗ 3. galvanometer
- ✗ 4. voltmeter

Question ID : **630680507040**
Option 1 ID : **6306801981666**
Option 2 ID : **6306801981665**
Option 3 ID : **6306801981667**
Option 4 ID : **6306801981668**
Status : **Answered**
Chosen Option : **1**

Q.71 _____ is a measure of closeness in shape between a waveform and its fundamental component.

Ans
- ✗ 1. Phase modulation
- ✗ 2. Pulse factor
- ✗ 3. Harmonic factor
- ✔ 4. Total harmonic distortion

Question ID : **630680507065**
Option 1 ID : **6306801981768**
Option 2 ID : **6306801981767**
Option 3 ID : **6306801981765**
Option 4 ID : **6306801981766**
Status : **Answered**
Chosen Option : **4**

Q.72 In slip-ring motors the starting current is _____ and the starting torque simultaneously _____ by adding an external resistance in the rotor circuit.

Ans
- ✗ 1. increased, reduced
- ✗ 2. increased, increased
- ✔ 3. reduced, increased
- ✗ 4. reduced, reduced

Question ID : **630680506999**
Option 1 ID : **6306801981504**
Option 2 ID : **6306801981503**
Option 3 ID : **6306801981501**
Option 4 ID : **6306801981502**
Status : **Answered**
Chosen Option : **4**

Q.73 Which of the following statement is correct?

I. A node is a junction of two or more branches of an electrical network

II. KCL also indicates the law of conservation of charges and can also be stated as at any node of a circuit, at every instant of time, the sum of incoming currents is equal to the sum of outgoing currents

Ans
- ✗ 1. Only II
- ✔ 2. Both I and II
- ✗ 3. Neither I nor II
- ✗ 4. Only I

Question ID : **630680507021**
Option 1 ID : **6306801981590**
Option 2 ID : **6306801981591**
Option 3 ID : **6306801981592**
Option 4 ID : **6306801981589**
Status : **Answered**
Chosen Option : **2**

Q.74 Which of the following is the method of measurement of low resistance?

I. Kelvin's double bridge method

II. Potentiometer method

Ans ✓ 1. Both I and II

✗ 2. Only I

✗ 3. Neither I nor II

✗ 4. Only II

Question ID : **630680507044**
Option 1 ID : **6306801981683**
Option 2 ID : **6306801981681**
Option 3 ID : **6306801981684**
Option 4 ID : **6306801981682**
Status : **Answered**
Chosen Option : **2**

Q.75 Which of the following is known as Spool insulators?

Ans ✗ 1. Pin Type insulators

✗ 2. Post insulators

✗ 3. Strain insulators

✓ 4. Shackle insulators

Question ID : **630680507008**
Option 1 ID : **6306801981540**
Option 2 ID : **6306801981539**
Option 3 ID : **6306801981537**
Option 4 ID : **6306801981538**
Status : **Not Answered**
Chosen Option : **--**

Q.76 _____ are of egg shape also called strain or guy insulators, and are used in guy cables, where it is necessary to insulate the lower part of the guy cable from the pole for safety of people and animals on the ground.

Ans ✗ 1. Pin Type insulators

✗ 2. Shackle insulators

✓ 3. Stay insulators

✗ 4. Post insulators

Question ID : **630680507007**
Option 1 ID : **6306801981536**
Option 2 ID : **6306801981534**
Option 3 ID : **6306801981533**
Option 4 ID : **6306801981535**
Status : **Not Answered**
Chosen Option : **--**

Q.77 The principle of _____ is particularly adapted to application in portable instruments measuring insulation resistance.

Ans

✗ 1. ratiometer voltmeters

✔ 2. ratiometer ohmmeters

✗ 3. ratiometer galvanometers

✗ 4. ratiometer ammeters

Question ID : 630680507036
Option 1 ID : 6306801981650
Option 2 ID : 6306801981649
Option 3 ID : 6306801981652
Option 4 ID : 6306801981651
Status : Answered
Chosen Option : 1

Q.78 In a 110 V dc chopper drive using the CLC scheme, the maximum possible value of accelerating current is 200 A, the lower limit of the current pulsation is 140 A. The ON and OFF periods are 15 ms and 12 ms respectively. Calculate the chopping frequency.

Ans

✗ 1. 1/27 Hz

✗ 2. 12 Hz

✗ 3. 15 Hz

✔ 4. 27 Hz

Question ID : 630680507069
Option 1 ID : 6306801981784
Option 2 ID : 6306801981783
Option 3 ID : 6306801981782
Option 4 ID : 6306801981781
Status : Answered
Chosen Option : 1

Q.79 Which of the following equation is stated as 'initial value theorem'?

Ans

✗ 1. $f(0+) = \lim_{s \to 0} \left[\dfrac{F(s)}{s} \right]$

✔ 2. $f(0+) = \lim_{s \to \infty} [sF(s)]$

✗ 3. $f(0+) = \lim_{s \to 0} [sF(s)]$

✗ 4. $f(0+) = \lim_{s \to \infty} \left[\dfrac{F(s)}{s} \right]$

Question ID : 630680507029
Option 1 ID : 6306801981624
Option 2 ID : 6306801981621
Option 3 ID : 6306801981622
Option 4 ID : 6306801981623
Status : Answered
Chosen Option : 2

Q.80 Which of the following is the advantage of HVDC transmission?

I. Rapid change of Energy flow

II. Negligible sheath loss

III. No skin effect

Ans
- ✗ 1. Only I and III
- ✗ 2. Only I
- ✗ 3. Only I and II
- ✓ 4. I, II and III

Question ID : **630680507003**
Option 1 ID : **6306801981519**
Option 2 ID : **6306801981517**
Option 3 ID : **6306801981518**
Option 4 ID : **6306801981520**
Status : **Not Attempted and Marked For Review**
Chosen Option : **--**

Q.81 Which of the following statement is correct regarding usage of insulator in transmission?

I. Insulators provide proper insulation and necessary clearances against the highest voltage in worst atmospheric condition

II. The insulators also prevent short circuiting between the different phase conductors and provide necessary mechanical support for the line conductors

Ans
- ✗ 1. Neither I nor II
- ✓ 2. Both I and II
- ✗ 3. Only II
- ✗ 4. Only I

Question ID : **630680507006**
Option 1 ID : **6306801981532**
Option 2 ID : **6306801981531**
Option 3 ID : **6306801981530**
Option 4 ID : **6306801981529**
Status : **Answered**
Chosen Option : **2**

Q.82 Which of the following is correct statement?

I. Star connection also be termed as 'T' connection

II. Delta connection can be termed as 'π'(pie) connection

Ans   ✗ 1. Neither I nor II

   ✗ 2. Only II

   ✗ 3. Only I

   ✓ 4. Both I and II

Question ID : **630680507023**
Option 1 ID : **6306801981600**
Option 2 ID : **6306801981598**
Option 3 ID : **6306801981597**
Option 4 ID : **6306801981599**
Status : **Answered**
Chosen Option : **4**

Q.83 According to Coulomb's law which of the following statement is correct?

I. The direction of force is along the line joining the charges

II. The force depends upon the medium in which the charges are placed.

Ans   ✓ 1. Both I and II

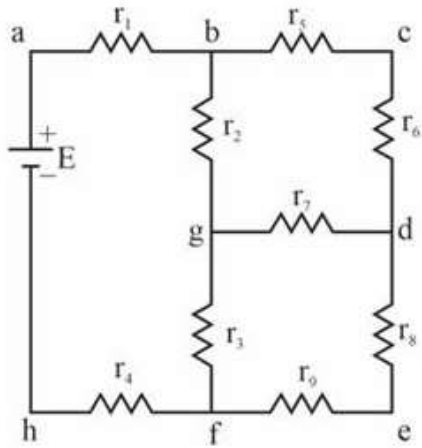   ✗ 2. Only I

   ✗ 3. Neither I nor II

   ✗ 4. Only II

Question ID : **630680507049**
Option 1 ID : **6306801981703**
Option 2 ID : **6306801981701**
Option 3 ID : **6306801981704**
Option 4 ID : **6306801981702**
Status : **Answered**
Chosen Option : **1**

Q.84 In given circuit diagram, determine the number of –

I. Junction points

II. Meshes

Ans ✗ 1. 4, 2

✓ 2. 4, 3

✗ 3. 6, 2

✗ 4. 7, 3

Q.85 The interaction of rotor currents with rotating flux wave produces _____ in the rotor of a 3-phase induction motor and as a consequence, rotor begins to rotate.

Ans ✗ 1. impedance

✗ 2. current

✓ 3. torque

✗ 4. inductance